

Year 1- ICT Curriculum.

Learning Objectives	Key Skills	Notes
Using technology		
<ul style="list-style-type: none"> To become skilful in using different tools to control technology. To understand the purpose of, and begin to use a range of different technology. To begin to develop typing speed and accuracy to enable independent access to a computer. 	<ul style="list-style-type: none"> Continue to develop their familiarity with a computer and keyboards Continue to develop their skills in using a mouse and/or trackpad to control a computer/laptop. Begin to develop their typing speed, using a range of games and programs in school. Children should also be encouraged to play these games at home. Continue exposure to a range of technology, including cameras, tablets, microphones/recording devices and computers. 	<p>See 'tools for teaching typing' document for software and websites to use.</p> <p>Develop ICT suite 'rules'</p> <p>Cover basic e-safety – design posters from ICT suite and classrooms</p>
Using the Internet		
<ul style="list-style-type: none"> To understand that information comes from different sources e.g. books, web sites, TV etc To understand that ICT can give access quickly to a wide variety of resources To talk about their use of ICT and the Internet and other methods to find information To be able to explore a variety of electronic information as part of a given topic To know buttons/icons can represent different functions e.g. record, pause, play 	<ul style="list-style-type: none"> Select appropriate buttons to navigate web sites or stored information Begin to understand that computers use icons, menus, hyperlinks to provide information and instructions e.g. Select a specific part of the CBeebies site to find an activity Access different types of information from different sources e.g. using CD players, web sites, TV, video, DVD etc <p><i>These skills rely on the teacher directing children to specific content. It is not expected for children to do open searching at this stage.</i></p>	<p>Classroom access to Beebots and grids to explore.</p> <p>Challenge cards to find game/links on websites.</p>

Communicating and collaborating online		
<ul style="list-style-type: none"> To start to understand that messages can be sent electronically over distances. 	<ul style="list-style-type: none"> Contribute ideas to a class email and together respond to messages- this can be to real life of 'fictitious' characters. 	Link to writing for a purpose – real life email to MP (for example) or head teacher.
Creating and Publishing		
<ul style="list-style-type: none"> To use technology to combine text with photographs, graphics and drawings. To create their own text based content, including adding basic effects to sections of text. 	<ul style="list-style-type: none"> Add text to photographs, graphics, drawings and sound using a computer. Use simple authoring tools to create their own content and begin to add basic effects to sections of text, changing the font size and colour. 	Powerpoint – link to literacy presentation Labelling photos of science experiments
Digital Media		
<ul style="list-style-type: none"> To know they can explore sound and music using technology and that they can create sound using computer programs. To know they can record sound using ICT that can be stored and played back To take photographs for a range of different purposes. To understand that video can be recorded using technology and to begin to record video. To understand that a range of different technology can be used to record sounds. 	<ul style="list-style-type: none"> Use a computer to compose and record basic rhythms. Continue to take photographs for a range of different purposes. Begin to record video Begin to record sounds using a range of different tools. 	Audio- use 2simple software- 2explore and 2beat. Edit soundtracks on I pads for film trailers.
Using Data		
<ul style="list-style-type: none"> To use ICT to begin to organise items.. To begin to use technology to create graphs and pictograms, recognising there is a link between data collected and the information presented on screen. 	<ul style="list-style-type: none"> Use ICT to sort objects into groups according to a give criteria, or criteria which the child identifies themselves. Begin to use technology to create graphs and pictograms. 	Link to data handling in maths – present findings from simple data collection
Programming and Control		

<ul style="list-style-type: none"> • To understand that devices respond to commands • To begin to understand how a computer processes instructions and commands (computational thinking) • To understand that they can programme a simple sequence of commands into a programmable robot or toy to send it on a route 	<ul style="list-style-type: none"> • Explore a range of control toys and devices • Begin to develop computational thinking by following instructions to move around a course and creating a series of instructions to move their peers around a course • Explore outcomes when individual buttons are pressed on robots, such as floor turtles and combine these together to draw simple shapes or follow a route. 	<p>Link to positional language, making maps and programming Beebots to follow paths.</p>
<p>Modelling and Simulations</p>		
<ul style="list-style-type: none"> • To understand computers can represent real or fantasy situations • To understand computer representations allows the user to make choices and that different decisions produce different outcomes 	<ul style="list-style-type: none"> • Understand that computers and technology can be used to represent and model situations. • Use an art package or drag and drop software to create a representation of a real or a fantasy situation • Explore a simulation to support a given topic and talk about what happens and why 	<p>Link to creative writing prompts and illustrations</p>

Year 2- ICT Curriculum.

Learning Objectives	Key Skills	Notes
Using technology		
<ul style="list-style-type: none"> To continue to develop typing speed and accuracy to enable independent and efficient access to a computer. To understand the purpose of, and begin to independently use a range of different technology. 	<ul style="list-style-type: none"> Work on developing typing speed, aiming for a minimum speed of 13wpm by the end of the year. Continue exposure to and increasingly independently use a range of technology, including cameras, tablets, microphones/recording devices and computers 	<p>Typing speed refers to copying WPM, composition WPM will be slower.</p> <p>See 'tools for teaching typing' document for software and websites to use.</p>
Using the Internet		
<ul style="list-style-type: none"> To talk about the different forms of information (text, images, sound, multimodal) and understand some are more useful than others To understand and talk about how the information can be used to answer specific questions To begin to develop key questions and find information to answer them To recognise the layout of a web page, recognise web addresses, menu buttons and links To understand that the internet contains a large amount of information and recognise the need to use search tools and search engines to begin to find information 	<ul style="list-style-type: none"> Recognise that not all information is useful some information is more useful Use web based resources to find answers to questions Develop questions about a specific topic and use information to answer those questions Begin to navigate within a website using hyperlinks and menu buttons to locate information Begin to manipulate information using copy and paste for a specific purpose Enter <u>given</u> text into a search engine to find specific given web sites Understand that web sites have a specific address e.g. www.bbc.co.uk/ Locate links to web sites from Favourites or saved hyperlinks, intranet or from the Learning Platform Use basic information from the internet. 	<p>Class challenge to locate websites and direct others to them.</p> <p>Use information from internet to create non fiction leaflets</p>

Communicating and collaborating online		
<ul style="list-style-type: none"> To start to understand that messages can be sent electronically over distances. To understand that email can be used to send messages electronically and people can reply to emails 	<ul style="list-style-type: none"> Look at the different ways that messages can be sent, letters, telephone, email, text, instant messaging etc Continue to contribute ideas to a class or group email and together respond to messages- this can be to real life of 'fictitious' characters. 	Writing for a purpose – link to fundraising or raising awareness
Creating and Publishing		
<ul style="list-style-type: none"> To use technology to word process work, making a wide range of edits and using common features of word processing tools. To use technology to create basic presentations giving consideration to the layout of slides and combining images and sound. To use the skills and techniques learnt to organise, reorganise and communicate ideas for a specific purpose in different contexts 	<ul style="list-style-type: none"> Word process work, changing the font, font size, colour and adding images and using text boxes, word art, and cut, copy and paste ensuring they can save and load their work. Create basic presentations (for example using Microsoft PowerPoint) changing the layout of slides and adding images and sound. 	Link to literacy – prepare final version of story using key skills
Digital Media		
<ul style="list-style-type: none"> To know they can explore sound and music in ICT using keyboards, and onscreen music software To know they can record sound using ICT that can be stored and played back and independently using a range of tools to record sound. To independently record video and sound using a range of tools. To use the computer to create basic images. To choose to take photographs for a range of different purposes. 	<ul style="list-style-type: none"> <i>Use a computer to compose and record basic rhythms. (only if not covered in Y1)</i> Record video for a range of purposes. Use a computer to create basic images. Continue to take photographs for a range of different purposes, developing independence. Independently record sounds using a range of different tools. 	Images- paint and http://canvastic.net , and http://pencilmadness.com/pencil_madness

Using Data		
<ul style="list-style-type: none"> To use technology to create graphs and amend created graphs. To begin to create their own branching databases using ICT, identifying objects and questions to classify data. 	<ul style="list-style-type: none"> Use technology to create graphs and pictograms, adding labels and amending the charts as appropriate. Begin to create their own branching database using ICT, identifying objects using yes or no questions. 	Data handling – link to maths
Programming and Control		
<ul style="list-style-type: none"> To continue to develop their understanding of how a computer processes instructions and commands. To understand that devices or on screen turtles are controlled by sequences of instructions or actions, and that these can be inputted using icons or by text. To create, edit and refine sequences of instructions for a variety of programmable devices. 	<ul style="list-style-type: none"> Further develop their understanding of computational thinking. Continue to explore floor turtles, combining sequences of instructions to follow a pattern or create a shape. Explore an on screen turtle navigate it around a course or grid and/or draw shapes by inputting a sequence of instructions. Begin to understand that the on screen turtle can be directed through the use of text. 	Beebot I pad App.
Modelling and Simulations		
<ul style="list-style-type: none"> To use a range of basic simulations to represent real life situations and explore the effects of changing variable and the benefits of using the simulations. 	<ul style="list-style-type: none"> Enter information into a basic computer simulation and explore the effects of changing the variables in simulations and discuss the benefits of using these simulations. Discuss their use of simulations and compare with reality 	Link to literacy – characters/fictional creatures

Year 3- ICT Curriculum.

Learning Objectives	Key Skills	Notes
Using technology (objectives throughout KS2)		
<ul style="list-style-type: none"> To continue to develop typing speed and accuracy to develop competency in typing To understand the purpose of and use independently a range of different technology. To make choices about when to use technology, which piece(s) of technology to use, which software/tools they are going to use on the technology and be able to explain their choices to others. 	<p>Throughout KS2 children should:-</p> <ul style="list-style-type: none"> Continue to become familiar with a range of devices, for example tablets, desktop computers, laptops, microphones, cameras etc and increasingly develop their independence and confidence in using these devices. Continue to increase their typing speed, and be encouraged to play games at home and school which help with this. Aim to reach the accepted competency rate for children of 20WPM by the end of Year 4. Be encouraged to increasingly make sensible choices about the technology they use to help them work, and to justify their choices- for example, why they have chosen to use a <i>tablet</i> rather than a laptop, or why they have chosen to use an <i>easi-speak</i> microphone rather than the computer to record sound. 	<p><i>Just like handwriting, it is important that children type themselves when using a computer- no matter how slow they may be!</i></p> <p>Typing speed refers to copying WPM, composition WPM will be slower.</p> <p>See 'tools for teaching typing' for software and websites to use.</p>
Using the Internet		
<ul style="list-style-type: none"> To follow a simple search to find specific information from a web site To find and use appropriate information To identify how different web pages are organised e.g. graphics, hyperlinks, text To navigate a web page to locate specific information 	<ul style="list-style-type: none"> Develop key questions to search for specific information with purpose to answer a problem e.g. to find out about different Roman Gods. Understand how a search engine works and begin to create and enter appropriate search strings. 	<p>Link to topic – developing information posters, leaflets and class books</p>

<ul style="list-style-type: none"> • To know that ICT enables access to a wider range of information and tools to help find specific information quickly • To understand a website has a unique address 	<ul style="list-style-type: none"> • Save and retrieve accessed information through the use of Favourites, History, and Save As • Understand that some information found through searching is more relevant than others • Use the information purposefully to complete specific tasks e.g. copy, paste and edit relevant information (ref. creating and publishing unit) • Talk about and describe the process of finding specific information 	
Communicating and collaborating online		
<ul style="list-style-type: none"> • To understand that Cloud based tools can allow multiple people to contribute to shared documents and Google Sites 	<ul style="list-style-type: none"> • Begin to use on-line tools, such as Google docs and sites to collaborate together- for example by working together to add ideas to a word bank, write a shared story 	Link to literacy – paired writing task
Creating and Publishing		

<ul style="list-style-type: none"> • To continue to produce work using a computer, using more advanced features of programs and tools. • To work collaboratively together to create documents, including presentations. • To use desk top publishing tools effectively and understand the differences between a word processor and desk top publisher. 	<ul style="list-style-type: none"> • Continue to word process a range of work in other curriculum areas, using more advanced word processing features such as columns and borders. • Work together to collaboratively produce a presentation using cloud based tools. • Understand the differences between a word processor and desktop publishing tools and use desk top publishing tools to create posters, leaflets and other documents which require specific formatting. 	<p>Link to literacy – making posters on genre of writing</p> <p>Link to maths – develop a maths mat on unit of work</p>
<p style="text-align: center;">Digital Media</p>		
<ul style="list-style-type: none"> • To understand they can compose music using icons to represent musical phrases • To understand ICT allows easy creation, manipulation and change • To know they can record sound using ICT that can be stored and played back and independently using a range of tools to record sound. • To independently record video using a range of devices and for a range of purposes. • To independently take photographs taking into account the audience and/or purpose for the image. • To create digital artefacts using photographs which they have taken or found. 	<ul style="list-style-type: none"> • Use a computer to sequence short pieces of music using a small selection of pre-record sounds. • Independently record video for a range of purpose, paying attention to the quality of the video capture. • Take photographs for a specific reason or project and/or find appropriate images on-line. • Create a video out of still images. • Use the computer to preform photo edits and create a range of digital creations using photos. 	<p>I pad film/sound App</p> <p>Using soundtrack on coding package</p>

<ul style="list-style-type: none"> To edit photographs using a range of basic tools. 		
Using Data		
<ul style="list-style-type: none"> To understand the basic structure of a database. To be able to add data to a pre-made database. To use the data in a pre-made database to generate graphs and charts. To use technology to create graphs and charts. 	<ul style="list-style-type: none"> Continue to use technology to create graphs and charts. Understand which a database is, and the basic structure of a database. Create graphs from pre-made databases, and enter their own data into a database and generate graphs using these. Use other software to present these findings as appropriate. 	Easy chart/Excel
Programming and Control		
<ul style="list-style-type: none"> To continue to develop their understanding of how computer and technology works and how computers process instructions and commands. To create, edit and refine more complex sequences of instructions for a variety of programmable devices. To use a computer to create basic applications, investigating how different variables can be changed and the effect this has.. 	<ul style="list-style-type: none"> Continue to develop understanding of how a computer and technology works, focusing on computational thinking. Begin to plan more complex sequences of instructions for on-screen and floor turtles test and amend these instructions. (e.g. using RoboMind) Use software to make basic puzzles and quizzes, changing parameters (e.g time allowed, points, number of pieces etc) to customise the puzzle or quiz (e.g. 2DIY) 	<p>Using programmable lego – coding</p> <p>Using code to make simple games</p>
Modelling and Simulations		
<ul style="list-style-type: none"> To use a range of simulations to represent real life situations. Use simulations to make and test predictions. 	<ul style="list-style-type: none"> Continue to explore simulations as appropriate and as link with other curriculum areas and discuss the benefits of using these simulations Use simulations to make and test predictions. 	Use of I pad Apps

Year 4- ICT Curriculum.

Learning Objectives	Key Skills	Notes
Using technology		
<ul style="list-style-type: none"> To continue to develop typing speed and accuracy to develop competency in typing To understand the purpose of and use independently a range of different technology. To make choices about when to use technology, which piece(s) of technology to use, which software/tools they are going to use on the technology and be able to explain their choices to others. 	<p>Throughout KS2 children should:-</p> <ul style="list-style-type: none"> Continue to become familiar with a range of devices, for example tablets, desktop computers, laptops, microphones, cameras etc and increasingly develop their independence and confidence in using these devices. Continue to increase their typing speed, and be encouraged to play games at home and school which help with this. Aim to reach the accepted competency rate for children of 20WPM by the end of Year 4. Be encouraged to increasingly make sensible choices about the technology they use to help them work, and to justify their choices- for example, why they have chosen to use a <i>tablet</i> rather than a laptop, or why they have chosen to use an <i>easi-speak</i> microphone rather than the computer to record sound. 	<p><i>Just like handwriting, it is important that children type themselves when using a computer- no matter how slow they may be!</i></p> <p>Typing speed refers to copying WPM, composition WPM will be slower.</p> <p>See 'tools for teaching typing' for software and websites to use.</p>
Using the Internet		
<ul style="list-style-type: none"> To draw information from a question to develop keywords to find relevant information e.g. What did Romans eat? To understand the dynamics of a search engine and know that there are different search engines (some within specific sites e.g. BBC, and some the whole of the Internet e.g. Google, Yahoo!igans, Ask 	<ul style="list-style-type: none"> Know that they can use search engine tools for different types of media e.g. Google Image Search, video, sound but understand that the results are not always what you expect Be aware that web sites are not always accurate and that information should be checked before it is used. 	<p>Link to topic – building a bank of facts and information – making class resources</p>

<p>Jeeves)</p> <ul style="list-style-type: none"> • To be able to skim read and sift information to check its relevance and modify their search strategies if necessary • To understand that the information they use needs to be appropriate for the audience they are writing for e.g. copying and pasting difficult language • To evaluate different search engines and explain their choices for using these for different purposes • To begin to recognise that anyone can author on the Internet and sometimes authors on the Internet can produce content which is offensive, rude and upsetting and to follow school rules if anything is found 	<ul style="list-style-type: none"> • Develop keywords and enter them into a chosen search engine, using more advanced search engine features. • Present their findings using a word processing or multimedia/publishing package for a specific audience 	
Communicating and collaborating online		

<p>To understand a small range of web 2.0 tools that can help them work together and collaborate; forums, shared documents etc</p> <ul style="list-style-type: none"> • To use the web 2.0 tools to work collaboratively on a project (e.g. sharing comparative data, creating a story) • To understand how e-mails work and be able to send an e-mail, including choosing a suitable subject and entering addresses in the 'to', 'cc' and 'bcc' fields. • To share and exchange their ideas using e-mail and electronic communication- inside the school environment. 	<ul style="list-style-type: none"> • Understand how e-mails work, and send e-mails between people within the woodlands-primary domain, including using the 'cc' and 'bcc' fields. • Use e-mail to e-mail work completed in school to their teachers and peers. • Collaborate with peers on a project to produce a finished piece to support topic work- using google documents. • Contribute/edit/refine contributions to a shared document and understand that all changes are visible 	<p>Link to literacy task – sending stories/poems to teacher</p>
<p>Creating and Publishing</p>		
<ul style="list-style-type: none"> • To create a website, giving thought to it's audience and including links, images and embedded media and documents. • To understand that evaluation and improvement is a vital part of a design process and ICT allows changes to be made quickly and efficiently 	<ul style="list-style-type: none"> • Work together to create a website based on a topic, area of interest or event (for example using goggle sites) which incorporates hyperlinks, images and embedded media/documents. • Use ICT to create a finished product or set of linked products, making revisions to their work. 	<p>Class website – celebrating achievements and updating on learning, etc – link to school website</p>
<p>Digital Media</p>		
<ul style="list-style-type: none"> • To know they can record sound using ICT that can be stored and played back and independently using a range of tools to 	<ul style="list-style-type: none"> • Create simple stop motion animations. • Use a range of devices to create 	<p>Topic link – animate moment in history and use music task as soundtrack</p>

<p>record sound, choosing appropriate tools for the situation and purpose.</p> <ul style="list-style-type: none"> • To use a range of technology to sequence sound samples, giving consideration to the audience and purpose. • To create basic stop motion animations using technology. • To independently record video using a range of devices and for a range of purposes. • To use technology to create images and apply effects to these images. • To use technology to edit video, applying basic effects and transitions. • To independently take photographs taking into account the audience and/or purpose for the image. 	<p>extended pieces of music using a wide range of pre-recorded samples.</p> <ul style="list-style-type: none"> • Independently choose to record video for a range of purposes, paying attention to the quality of video capture. • Use a range of tools to create more complex images using a computer (no layering) • Edit video using a range of basic video editing applications. • Continue to take photographs for a specific reason or project and/or find appropriate images on-line. 	
Using Data		
<ul style="list-style-type: none"> • To continue to use technology, including spreadsheets to create graphs and present data in different ways. • To be able to design and create a basic database, including using basic data validation. • To use a database to answer questions by constructing queries. 	<ul style="list-style-type: none"> • Plan and create their own database, creating fields and applying simple data validation. • Use pre-made databases and those which they have created themselves to answer questions by constructing basic queries. Understand how to translate questions into queries to find information e..g to find the most common etc. Use other software to present these findings as appropriate • <i>Begin to use a spread sheet to enter data and create graphs. (2013-14 onwards)</i> 	Link to maths/science data
Programming and Control		
<ul style="list-style-type: none"> • To continue to develop their understanding of how computer and technology works and how computers process instructions and 	<ul style="list-style-type: none"> • <i>Begin to plan more complex sequences of instructions for on-screen and floor turtles, test and amend these instructions. (e.g.</i> 	<p>Scratch, Kodu – game building</p> <p>Robomind</p>

<p>commands.</p> <ul style="list-style-type: none"> • <i>To create, edit and refine more complex sequences of instructions for a variety of programmable devices (2012-13 only)</i> • Use templates on a computer to create a game, which can be controlled by external inputs, changing parameters and algorithms and investigating the effect this has on the response. 	<p><i>using RoboMind) (2012-13 only)</i></p> <ul style="list-style-type: none"> • Use computer game design software to plan, design and make their own, multi-level game, controllable by external inputs, changing parameters and responses. (e.gf using 2DIY) 	<p>Lego Coding/Design</p>
<p>Modelling and Simulations</p>		
<ul style="list-style-type: none"> • To understand that ICT allows for situations to be modelled, or those which it would be impractical to try out in real life and investigate the effect of changing variables in these simulations. • TO use software to model 3D objects made up of cuboids. 	<ul style="list-style-type: none"> • Begin to use software to represent 3D objects or items. • Continue to explore simulations as appropriate and as link with other curriculum areas. 	<p>Use Lego Digital Designer for 3D modelling task.</p>

Year 5- ICT Curriculum.

Learning Objectives	Key Skills	Notes
Using technology		
<ul style="list-style-type: none"> To continue to develop typing speed and accuracy to develop competency in typing To understand the purpose of and use independently a range of different technology. To make choices about when to use technology, which piece(s) of technology to use, which software/tools they are going to use on the technology and be able to explain their choices to others. 	<p>Throughout KS2 children should:-</p> <ul style="list-style-type: none"> Continue to become familiar with a range of devices, for example tablets, desktop computers, laptops, microphones, cameras etc and increasingly develop their independence and confidence in using these devices. Continue to increase their typing speed, and be encouraged to play games at home and school which help with this. Be encouraged to increasingly make sensible choices about the technology they use to help them work, and to justify their choices- for example, why they have chosen to use a <i>tablet</i> rather than a laptop, or why they have chosen to use an <i>easi-speak</i> microphone rather than the computer to record sound. 	<p><i>Just like handwriting, it is important that children type themselves when using a computer- no matter how slow they may be!</i></p> <p>Typing speed refers to copying WPM, composition WPM will be slower.</p> <p>See 'tools for teaching typing' for software and websites to use.</p>
Using the Internet		
<ul style="list-style-type: none"> To use a range of sources to check validity and recognise different viewpoints and the impact of incorrect data To save and use pictures, text and sound and be able to import into a document for presentation (ref. multimedia presentation) To recognise that the Internet may contain material that is irrelevant, bias, implausible and inappropriate 	<ul style="list-style-type: none"> Discuss different strategies for finding relevant information e.g. using different keywords to find information on a given enquiry Use a range of keywords to find different sources of information and enter them into a chosen search engine Modify searches further to find relevant information for a report 	<p>Delivered alongside 'Creating and Publishing' unit.</p>

<ul style="list-style-type: none"> To understand the issues of copyright and how they apply to their own work 	<ul style="list-style-type: none"> Select and combine information from a range of different sources and present their findings using a word processing or multimedia/publishing package for a specific audience Be aware that web sites are not always accurate and that information should be checked before it is used. Discuss issues of copyright and downloading material e.g. mp3s, images, videos etc. Find images which are creative common licenced and understand the importance of stating their sources. 	
Communicating and collaborating online		
<ul style="list-style-type: none"> To share and exchange their ideas using e-mail and electronic communication- inside the school environment. To use collaboration tools to work together to produce a joint piece of work 	<ul style="list-style-type: none"> Continue to use e-mail to e-mail within woodlands-primary and to e-mail work completed in and out of school to their teachers and peers. Collaborate on a project using a range of web 2.0 tools to support their work- including, but not limited to , goggle documents and sites (within the woodlands-primary domain) Begin to collaborate with other children outside of Woodlands-primary (e-safety paramount) Upload files to an online area e.g. video, photo story, sounds, images 	All delivered as part as general curriculum.
Creating and Publishing		
<ul style="list-style-type: none"> To create non-traditional presentations using a range of tools, for a specific purpose (2012- 	<ul style="list-style-type: none"> Use an alternative presentation tool (for example <i>Prezi</i> or <i>Ahead</i>) to create a 	

<p>13 only)</p> <ul style="list-style-type: none"> • To create websites for a specific purpose and improve these sites. • To use technology to help them present their work, showing an increasing degree of skill and using advanced features of software and tools. • To select tools which they can use to help them achieve a specific aim and justify these choices to others. 	<p>presentation linking into a topic, area of interest or event.</p> <ul style="list-style-type: none"> • Continue to create websites based on topics, area of interest or events, increasing the complexity of these sites. • Continue to regularly use word processing and desktop publishing to present their work, combining formatted text with other media and making choices about programs and features to use and justifying these choices to others. • Continue to use ICT to create a finished product or set of linked products, developing consistency in style across linked products. 	
<p style="text-align: center;">Digital Media</p>		
<ul style="list-style-type: none"> • <i>To use a range of technology to sequence sound samples, giving consideration to the audience and purpose. (2012-13 only)</i> • To use technology to electronically compose music or sounds including creating melodies and save these as audio files. • To use technology to capture and edit video, applying a range of different effects and incorporating numerous video clips. • To use technology to create images including using layers. • To understand the difference between a image and a vector drawing. • To independently take photographs and record video taking into account the audience and/or purpose for the image/video. 	<ul style="list-style-type: none"> • <i>Use a range of devices to create extended pieces of music using a wide range of pre-recorded samples. (2012-13 only)</i> • Use a range of devices to create music samples and sequence these. • Create and plan film trailers incorporating a range of different scenes and effects. • Use image creation tools to create more complex images, including using layers. Understand the differences between an image and a vector drawing. • Continue to choose to independently record video for a range of purposes. • Continue to take photographs for a specific reason or project and/or find appropriate images on-line. 	<p>Audio- use web based on-line tools and iPad apps.</p>
<p style="text-align: center;">Using Data</p>		

<ul style="list-style-type: none"> • To continue to use, search, enter data into and create their own databases • To continue to use technology, including spreadsheets to create graphs and present data in different ways.. 	<ul style="list-style-type: none"> • Continue to use the computer and spreadsheets to create and alter graphs and charts. • Continue to use, query and create their own databases as appropriate, linking into work across the curriculum. • If appropriate and cross curricular links present the opportunity, begin to explore spreadsheets entering basic formulae. 	
Programming and Control		
<ul style="list-style-type: none"> • To continue to develop their understanding of how computer and technology works and how computers process instructions and commands, including the use of coding languages. • To explore ways in which software can be planned. • To use assisted programing software to create basic software which interacts with external controllers, and elements on screen, creating algorithms and using logic and calculations. 	<ul style="list-style-type: none"> • Continue to develop an understanding of how technology works, with a focus on developing computational thinking. • Understand that software relies on codes to run and that a range of different coding languages exist. • Explore different ways in which computer software can be planned. • Use a range of assisted programing software (e.g Scratch and/or Kodu) to plan, design and create basic software (for example a simple game), which interact with external controllers (e.g. keyboard and/or mouse). Using the software control the movement and responses of different elements on screen. • Use visual programing based software to plan, design and create basic non-game software which use logic, algorithms and calculations. <i>(e.g. use scratch to create an interactive maths quiz for a KS1 child)</i> 	
Modelling and Simulations		
<ul style="list-style-type: none"> • To understand that ICT allows for situations 	<ul style="list-style-type: none"> • Use software to create models of 3D 	Use Trimble Sketckup for the 3D modelling

<p>to be modelled, or those which it would be impractical to try out in real life and investigate the effect of changing variables in these simulations.</p> <ul style="list-style-type: none"> • Know that simulations are often guided by hidden rules • To use software to model 3D objects. 	<p>objects, landscapes or items.</p> <ul style="list-style-type: none"> • Explore a range of increasingly complex simulations, exploring the effect of changing variables and recording the results. 	<p>task.</p>
---	---	--------------

Year 6- ICT Curriculum.

Learning Objectives	Key Skills	Notes
Using technology		
<ul style="list-style-type: none"> To continue to develop typing speed and accuracy to develop competency in typing To understand the purpose of and use independently a range of different technology. To make choices about when to use technology, which piece(s) of technology to use, which software/tools they are going to use on the technology and be able to explain their choices to others. 	<p>Throughout KS2 children should:-</p> <ul style="list-style-type: none"> Continue to become familiar with a range of devices, for example tablets, desktop computers, laptops, microphones, cameras etc and increasingly develop their independence and confidence in using these devices. Continue to increase their typing speed, and be encouraged to play games at home and school which help with this. Be encouraged to increasingly make sensible choices about the technology they use to help them work, and to justify their choices- for example, why they have chosen to use a <i>tablet</i> rather than a laptop, or why they have chosen to use an <i>easi-speak</i> microphone rather than the computer to record sound. 	<p><i>Just like handwriting, it is important that children type themselves when using a computer- no matter how slow they may be!</i></p> <p>Typing speed refers to copying WPM, composition WPM will be slower.</p> <p>See 'tools for teaching typing' for software and websites to use.</p>
Using the Internet		
<ul style="list-style-type: none"> To check plausibility of information from a variety of sources on the same topic To use a range of sources to check validity and recognise different viewpoints and the impact of incorrect data To understand plagiarism and the importance of acknowledging sources 	<ul style="list-style-type: none"> Understand the dynamics of different search engines and know that there are different search engines which may focus on different media Modify searches further to find relevant information for a report Talk about where web content might originate from by looking at web address, author, other linked pages Talk about validity and plausibility of information by checking other sources 	<p>Useful websites for Plausibility:</p> <ul style="list-style-type: none"> <i>Investigate plausibility</i> http://www.school-portal.co.uk/GroupHomepage.asp?GroupID=257454 Dog Island Free Forever: A puppy dog paradise. http://www.thedogisland.com The Pacific Northwest Tree Octopus:

	<ul style="list-style-type: none"> • Recognise the impact of using incorrect information in their work • Skim and select information checking for bias and different viewpoints 	<ul style="list-style-type: none"> • http://zapatopi.net/treeoctopus.html • Victorian Robots: http://www.bigredhair.com/robots/index.html
Communicating and collaborating online		
<ul style="list-style-type: none"> • To use appropriate forms of communication to, share information or ideas • To use collaboration tools to work together to produce a joint piece of work with children both inside Woodlands Primary and in other schools. 	<ul style="list-style-type: none"> • Continue to collaborate on a project using a range of web 2.0 tools to support their work- including, but not limited to , goggle documents and sites- both with children in their class, other classes and children from other schools. • Respond to e-mails sent from outside the woodlands-primary domain using their woodlands-primary e-mail account. (e-sfatey paramount) • Talk about the different forms of electronic communication and web 2.0 tools, discuss appropriateness of using different tools in different contexts and the advantages and disadvantages 	Collaboration and e-mails with others schools as part of transition to high school.
Creating and Publishing		
<ul style="list-style-type: none"> • To use tools to help them design and create a web based application for smart phones/tablets, giving consideration to the market/audience for their application. • To create websites for a specific purpose and improve these sites. • To use technology to help them present their work, showing an increasing degree of skill and using advanced features of software and tools. 	<ul style="list-style-type: none"> • Continue to create websites based on topics, area of interest or events, increasing the complexity of these sites. • Continue to create presentations which link into a topic, area of interest or event, choosing an appropriate tool or service • Create a web based application for a smart phone or tablet with consideration for the audience- containing information about a topic, trip, the school or to support work in other areas 	

<ul style="list-style-type: none"> • To select tools which they can use to help them achieve a specific aim and justify these choices to others., • Understand the importance of evaluation and adaptation of individual features to enhance the overall product. 	<p>of the curriculum.</p> <ul style="list-style-type: none"> • <i>Create a non-linear presentation. (2013-14 onwards)</i> • Continue to regularly use word processing and desktop publishing to present their work, combining formatted text with other media and making choices about programs and features to use and justifying these choices to others. • Continue to use ICT to create a finished product or set of linked products, developing consistency in style across linked products. 	
<p style="text-align: center;">Digital Media</p>		

<ul style="list-style-type: none"> • <i>To use technology to electronically compose music or sounds including creating melodies and save these as audio files. (2012-13 only)</i> • <i>To begin to recognise the different layers of sound in a professional broadcast and use technology to record and manipulate music/sound refining for a given audience or project (2013-14 onwards)</i> • To use technology to create astop motion animations and add audio and video effects to these animations. • To use a computer to add complex effects to photographs and to preform common photograph edits (e.g. red eye removal) • To compare different image creation and editing tools and select the most appropriate tool to use, justifying their choices. • To independently take photographs and record video taking into account the audience and/or purpose for the image/video. 	<ul style="list-style-type: none"> • Use a range of devices to create music samples and sequence these. (2012-13 only) • Independently choose and use an appropriate device to record sounds in order to create a sound file and use software manipulate sounds using computer software – e.g. remove unwanted silences/trimming start and end (2013-14 onwards)- combine to make a podcast or similar broadcast. • Create stop motion animations and combine with video and audio effects. • Apply more complex effects to photographs using a computer. • Compare and contrast different image creation and editing tools across a range of platforms. • Continue to choose to independently record video for a range of purposes. • Continue to take photographs for a specific reason or project and/or find appropriate images on-line. 	<p>Audio- use web based on-line tools, audacity on a computer and iPad apps. Focus on using ambient sounds.</p>
<p style="text-align: center;">Using Data</p>		
<ul style="list-style-type: none"> • To continue to use, search, enter data into and create their own databases.. • To continue to use technology, including spreadsheets to create graphs and present data in different ways. To be able to design, construct, evaluate and modify simple models i.e. enter data, enter formulae, copy cells and use simple formatting in a spreadsheet. 	<ul style="list-style-type: none"> • Continue to use, query and create their own databases as appropriate, linking into work across the curriculum • Understand what a spreadhseet is and the basic features of a spreadsheet and how these may be used in real life applications. • Linked into a theme, or real life application, create a spreadhseet, enter basic formulae (simple calculations and SUM) and change 	

<ul style="list-style-type: none"> • To use a spreadsheet to draw a graph to show data • To understand that ICT allows quick and easy changes to be made to different variables once a spreadsheet is set up. Talk about how the spreadsheet helps them to manipulate a model easily 	<p>data in a spreadsheet to model situations and answer 'What if...' questions.</p>	
<p style="text-align: center;">Programming and Control</p>		
<ul style="list-style-type: none"> • To continue to develop their understanding of how computer and technology works and how computers process instructions and commands, including the use of coding languages. • <i>To use assisted programing software to create basic software which interacts with external controllers, and elements on screen, creating algorithms and using logic and calculations. (2012-13)</i> • To use assisted programing software to more complex software which interacts with external controllers, and elements on screen, creating algorithms and using logic and calculations. (2013-14 onwards) • To control an on screen icon using text based programing, including writing complex written algorithms which involve sensors. • TO begin to write simple scripts in an international recognised coding language (2013-14 onwards) 	<ul style="list-style-type: none"> • Continue to explore different ways in which computer software can be planned. • Continue to develop an understanding of how technology works, with a focus on developing computational thinking • <i>Use a range of visual based programing software (e.g Scratch and Kodu) to plan and design basic software (for example a simple game), controlling the movement and responses of different elements on screen. (2012-13 only)</i> • Use a range of visual programing software to plan and design more complex software (for example a multi-level game) (2013-14 onwards) • Control an on-screen icon using text based controls, including responding to sensors and repeating written algorithms (e.g. Robomind) • <i>Begin to explore text based programing languages and create basic scripts (for example writing a python script to identify if a number is odd or even) (2013-14 onwards)</i> 	

Modelling and Simulations

<ul style="list-style-type: none">• To understand that ICT allows for complex situations to be modelled, or those which it would be impractical to try out in real life investigate the effect of changing variables in these simulations.• Know that simulations are often guided by hidden rules• To use software to model 3D objects, working to a scale.	<ul style="list-style-type: none">• Use software to create models of 3D objects, landscapes or items, including creating to scale• Use a range of more complex simulations, exploring the link to 'real life' and the impact of changing variables. Link the work exploring simulations to creating their own basic simulations in excel (see Using Data strand).	Use Trimble Sketckup for the 3D modelling task.
--	--	---